

Remarks

Applicants confirm election of Group I, claims 1 – 8, but do so with traverse, maintaining that due the related nature of the claims, examining the two groups together imposes no added burden on the Patent Office. Claims 9 – 12 are withdrawn as being drawn to non-elected invention.

Applicants note the observation that the oath or declaration is defective. This has been corrected in an ADS.

The Specification was amended in a number of locations to replace “absorb” with adsorb” as used in the claims. Numbered paragraphs [0040] and [0041], the paragraphs following Table V, were amended to correct the obvious error in hours (see paragraph [0039] and Table V).

Non-art Rejections

At present, Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter not described in the specification.

At present, Claims 2 – 5 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter applicants regard as the invention.

In both cases for Claim 2, a discrepancy between the neutralization rate claimed and disclosed in specification is pointed to. Applicants respectfully traverse, pointing attention to the Abstract as well as the first paragraph (paragraph [0013]) of the Detailed Description of the Invention, where in both cases the degree of neutralization described is up to 99% as in Claim 2.

Claim 3 is held to be indefinite because of the word “topmost” in the claim and insufficient antecedent basis for the limitation, “packaged item.” As suggested by the examiner, “topmost” has been deleted. Also, the claim as amended now has proper antecedent basis for “packaged item.” Further, “absorbent” has been replaced with “adsorbent” to make claim 3 consistent with other claims.

Claims 4 and 5 have been amended to clarify that the addition of active ingredient results in less adsorption of amine than when it isn't added. See second paragraph following Table V (paragraph [0041]).

Claim 8 has been amended to provide a structure with a modified atmosphere. This is clear to one skilled in the art. See for example the penultimate paragraph (paragraph [0026]) before the Examples

Art Rejection - Novelty

At present, Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Hekal. This novelty rejection cannot stand because the cited reference does not teach all the limitations of the invention as presently claimed. Reconsideration of this rejection is requested in view of amendments and following remarks.

Hekal does not teach a package containing food (i.e., fish or other perishable food items). Instead, it pertains to providing a material for absorbing odors particularly from human bodily fluids and from waste materials (even the fish wrapping cited in the office action is included in the context of waste along with "animal" waste – see p. 8, ll. 15 - 24).

Hekal does not teach a package comprising a multilayer polymer film. The closest that Hekal comes is the "fish wrapping", but even if this were considered to be a "package", there is no teaching that the package comprises a multilayer polymer film. Instead, Hekal merely states the zeolite/polymer matrix can be used. Films may be suggested, but packages comprising multilayer polymer films are not taught or even suggested. P. 8, ll. 20 – 22 teaches, "bags containing fish or animal waste can be lined with the odor absorbing material of the present invention." Nothing teaches or suggests that the bags are even polymeric. They may just as well be paper for example. Nothing teaches or suggests that the "odor absorbing material" is anything more than a unilayer film.

Hekal does not teach a multilayer polymer film. The office action points to p. 7, ll. 21 – 23 as a basis for this rejection, but that clearly teaches a "multilayer structure", not a "multilayer polymer film." The other layers are "absorbent layers" that would absorb, for example, menstrual fluid. At p. 7, l. 34, this is taught to be a fabric. The only other film taught as being included with the zeolite/polymer matrix is a "fluid impermeable" backside layer (p. 8, ll. 8 – 10).

Hekal does not teach an adsorbent polymer in the multilayer polymer film that consists essentially of a copolymer of ethylene with an  $\alpha,\beta$ -ethylenically unsaturated carboxylic acid having from 3 to 8 carbon atoms. Instead, Hekal pertains to "zeolite" and its ability to adsorb amines (p. 6, ll. 2 – 3), not an adsorbent polymer. The zeolite is matrixed in a polymer at high concentrations (see Examples where zeolite is used in the range of 50 – 60 wt.%). A wide range of polymers is disclosed in Hekal but they are not taught to be "adsorbent polymers," Instead, the polymers are selected for their ability to form a matrix with the zeolite, typically through reacting with and binding the zeolite into the matrix (p. 5, ll. 6 – 33). Polymers containing ethylene are taught as being more porous to amines and as permitting ready migration of amines onto the zeolite (p. 6, ll. 5 – 9). To provide for reaction and binding of zeolites, the polymers may contain carboxylic acid or anhydride functional groups (p. 5, ll. 12 – 13) and acid groups such as sulfonates, sulfates, phosphates, acrylates, phosphones or other groups which in solution can react with amines to form a salt such as anhydride polymers (p. 5, 19 – 23). The polymers may also include film forming polymers such as polyacrylates, polyethylene acrylic acid, polyethylene maleic anhydride, or polystyrene maleic anhydride polymers (p. 5, ll. 30 – 33).

Art Rejection - Obviousness

15. At present, Claims 2, 4, and 6 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hekal in view of Yoshikawa et al. Reconsideration of this rejection is requested in view of amendments and following remarks.

As noted above, Hekal does not teach a package comprising a multilayer film. Further, there is no suggestion of any adsorbent polymer consisting essentially of a copolymer of ethylene with an  $\alpha,\beta$ -ethylenically unsaturated carboxylic acid having from 3 to 8 carbon atoms. In fact, Hekal teaches away from such a copolymer being an adsorbent polymer, when it states that polymers containing ethylene are more porous to amines and permit ready migration of amines onto the zeolite (p. 6, ll. 5 – 9). In view of

this, one skilled in the art would at most consider the ethylene polymer as a "conduit" to the zeolite, not as an adsorbent polymer. Yoshikawa et al. does not cure these defects.

With respect to Claim 2, Yoshikawa is relied upon to suggest neutralizing the copolymer of ethylene with an  $\alpha,\beta$ -ethylenically unsaturated carboxylic acid having from 3 to 8 carbon atoms.

There must be motivation in the art taken as a whole to modify the references in a way that suggests all the limitations of the claims taken as a whole. Hekal alone or taken with Yoshikawa do not provide such. Yoshikawa makes no suggestion that a copolymer of ethylene with an  $\alpha,\beta$ -ethylenically unsaturated carboxylic acid or an ionomer thereof would have any utility as an adsorbent polymer. Ability to confer heat sealability and seal strength would not motivate one skilled in the art wanting to find an amine adsorbent to use an ionomer. Even if neutralizing the copolymer of ethylene with an  $\alpha,\beta$ -ethylenically unsaturated carboxylic acid were suggested, all the limitations of claim 2 still would not be met. Applicants see no suggestion to employ an ethylene copolymer in the references (ethylene polymers are taught to be "porous" not adsorbent, thus teaching away from present invention). Why not chose one of the other polymers taught in Hekal? Also, one would still be left without any suggestion of an ionomer of a copolymer of ethylene with an  $\alpha,\beta$ -ethylenically unsaturated carboxylic acid as an adsorbent polymer since neither reference suggests such.

With respect to Claim 4, it is not totally clear what Yoshikawa is relied upon to correct. Yoshikawa does teach multilayer polymeric films not taught in Hekal, but neither Hekal nor Yoshikawa suggest employing a zeolite to reduce adsorption of amine over time. Indeed this would be totally contrary to the teaching on Hekal in which the zeolite does all the adsorption.

Applicants traverse the argument that the invention would be obvious because varying the amount of zeolite to get the desired result is only a matter of routine experimentation. Hekal teaches away from any level of zeolite reducing adsorption because the entire teaching of Hekal focuses on zeolite as the sole adsorption agent. As such, one would expect that adding any amount of zeolite would increase adsorption, not decrease it. Even so, the

surprising result of decreasing adsorption by using a material known for its adsorption properties is demonstrated in the examples.

With respect to Claim 6, Yoshikawa fails to cure the deficiencies of Hakel for the same reasons discussed above. There is no suggestion that any level of acid comonomer has any level of amine scavenging effect, so optimization though routine experimentation cannot possibly be a basis for rejection.

Thus, in view of the above, these obviousness rejections cannot stand as a matter of law and should be withdrawn.

16. At present, Claims 3 and 5 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hekal in view of Kennedy et al. Reconsideration of this rejection is requested.

Kennedy et al. is used to correct the stated failure of Hakel to teach a "sealant layer" in contact with the packaged fish or other perishable food item. Even if Kennedy et al. corrected this deficiency, the combination of references is still deficient in a number of other areas as discussed in response to other rejections herein. For example, still there is no suggestion of any polymer as an adsorbent polymer, indeed Hakel teaches away from ethylene polymers as adsorbents as noted. There is also no suggestion that an agent known to adsorb amines could be used to hinder the adsorption of an adsorbent polymer. There is no basis for using routine experimentation to adjust zeolite concentration to achieve a desired level of amine adsorption. As noted, Hakel teaches away from any level of zeolite reducing adsorption because the entire teaching of Hakel focuses on zeolite as the sole adsorption agent. As such, one would expect that adding any amount of zeolite would increase adsorption, not decrease it. Even so, the surprising result of decreasing adsorption by using a material known for its adsorption properties is demonstrated in the examples.

Thus, this obviousness rejection cannot stand as a matter of law and should be withdrawn.

17. At present, Claims 3, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hekal in view of Yoshikawa et al. and in further view of Kennedy et al. Reconsideration of this rejection is requested.

Kennedy et al. is used to cure the stated deficiency of Hekal in view of Yoshikawa failing to teach a "sealant layer" in contact with packaged fish and other perishable food item. As discussed above, Hekal in view of Yoshikawa fails to teach or suggest the claims without the "sealant layer" limitation. So, even if Kennedy et al. corrected this deficiency, the combination of references is still deficient in a number of other areas as discussed in response to other rejections herein. For example, there is no suggestion of any polymer as an adsorbent polymer, indeed Hakel teaches away from ethylene polymers as adsorbents as noted. There is also no suggestion that an agent known to adsorb amines could be used to hinder the adsorption of an adsorbent polymer. There is no basis for using routine experimentation to adjust zeolite concentration to achieve a desired level of amine adsorption. As noted, Hakel teaches away from any level of zeolite reducing adsorption because the entire teaching of Hakel focuses on zeolite as the sole adsorption agent. As such, one would expect that adding any amount of zeolite would increase adsorption, not decrease it. Even so, the surprising result of decreasing adsorption by using a material known for its adsorption properties is demonstrated in the examples.

Thus, this obviousness rejection cannot stand as a matter of law and should be withdrawn.

18. At present, Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hekal. Reconsideration of this rejection is requested.

This would be totally contrary to the teaching of Hekal in which the zeolite does all the adsorption. Applicants traverse the argument that the invention would be obvious because varying the amount of zeolite to get the desired result is only a matter of routine experimentation. Hakel has no teaching whatsoever about adsorbent polymers. If anything as discussed above, Hakel teaches away from ethylene polymers being adsorbent. Furthermore Hakel teaches away from any level of zeolite reducing adsorption

because the entire teaching of Hakel focuses on zeolite as the sole adsorption agent. Even this were not the case, the surprising result of decreasing adsorption by using a material known for its adsorption properties is demonstrated in the examples.

Thus, this obviousness rejection cannot stand as a matter of law and should be withdrawn.

19. At present, Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hekal in view of Andersson et al. Reconsideration of this rejection is requested.

Andersson et al. is used to fill the stated deficiency in Hekal of not teaching or suggesting a modified atmosphere in the headspace between the covering film and the food in the package. Since Hakel does not teach a package for food, it is unlikely that one skilled in the art would even consider modifying any "headspace" between the zeolite/polymer matrix and say the wrapped fish or animal waste. Even if one were to be led to include a modified atmospheric headspace, Hakel as modified would still be deficient for all the reasons stated elsewhere herein. For example, there still is no suggestion of any polymer as an adsorbent polymer, indeed Hakel teaches away from ethylene polymers as adsorbents as noted. There is also no suggestion that an agent known to adsorb amines could be used to hinder the adsorption of an adsorbent polymer. There is no basis for using routine experimentation to adjust zeolite concentration to achieve a desired level of amine adsorption. As noted, Hakel teaches away from any level of zeolite reducing adsorption because the entire teaching of Hakel focuses on zeolite as the sole adsorption agent. As such, one would expect that adding any amount of zeolite would increase adsorption, not decrease it. Even so, the surprising result of decreasing adsorption by using a material known for its adsorption properties is demonstrated in the examples.

Thus, this obviousness rejection cannot stand as a matter of law and should be withdrawn.

#### Conclusion

In view of the above remarks and the enclosed amendments, it is felt that all claims are now in condition for allowance and such action is requested. Should the Examiner believe that an interview or other action in Applicants' behalf would expedite prosecution of the application, the Examiner is urged to contact Applicant's attorney by telephone at (302) 992-3219.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Craig H. Evans', with a large, stylized flourish extending to the right.

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